

AMENDMENTS TO THE CLAIMS

1. (Currently Amended) An optical transmitter, comprising:
 - a) a ~~light-emitting device~~ semiconductor laser diode for emitting light by supplying a bias current and modulation current;
 - b) an optical splitter for splitting the light emitted from the light-emitting device;
 - c) a dispersion controller having a first dispersion generator and a waveform monitor, the first dispersion generator receiving a portion of the light emitted from the light-emitting device and split by the optical splitter, adding a predetermined dispersion to the split light, and outputting dispersed light to the waveform monitor; and
 - d) a processing unit for maintaining the dispersed light output from the first dispersion generator to have the predetermined quality by controlling at least one of the bias current and the modulation current supplied to the semiconductor laser diode.
2. (Currently Amended) The optical transmitter according to claim 1, wherein the waveform monitor monitors the dispersed light as an eye-diagram, and the ~~predetermined quality is defined by an opening of the eye-diagram~~ processing unit defines the predetermined quality in terms of an opening of the eye-diagram.
3. (Cancelled)
4. (Currently Amended) The optical transmitter according to claim 1, further ~~comprises~~ comprising a second dispersion generator for adding a dispersion to the light emitted from the ~~light-emitting device~~ laser diode and outputting ~~[[a]]~~ dispersed light to the optical

splitter, the processing unit controlling the dispersion of the second dispersion generator so as to maintain the dispersed light output from the first dispersion generator to have the predetermined quality.

5. (Currently Amended) An optical transmission system, comprising:

a transmitting station having an optical transmitter that includes a semiconductor laser diode for outputting an optical signal by supplying bias and modulation currents;

a receiving station having an optical receiver;

at least two optical ~~path~~ paths for connecting the transmitting station and the receiving station; and

a central station for controlling the optical transmission system,

wherein the central station, when a fault occurs in one of the optical ~~path~~ paths connecting the transmitting station to the receiving station and the other of the optical ~~path~~ paths is selected, sends information relating to a dispersion based on the other of the other of the optical ~~path~~ paths to the transmitting station, and

wherein the optical transmitter outputs a dispersed light so as to compensate the dispersion ~~due to~~ of the other of the optical ~~path~~ paths by controlling one of the bias and modulation currents supplied to the laser diode.

6. (Currently Amended) The optical transmission system according to claim 5, wherein the optical transmitter further comprises:

~~a light emitting device for outputting an optical signal;~~

a first dispersion generator for adding the dispersion of the other of the optical paths based on information sent from the central station to a portion of the optical signal output from the ~~light-emitting device~~ laser diode and for outputting a dispersed optical signal; and

a processing unit for controlling the ~~light-emitting device~~ laser diode so as to compensate the dispersed optical signal output from the first dispersion generator to ~~have~~ maintain a predetermined quality by controlling one of the bias and modulation currents.

7. (Currently Amended) The optical transmission system according to claim 5 6, wherein the optical transmitter further comprises:

~~a light-emitting device for outputting a first optical signal;~~

a second dispersion generator disposed between the laser diode and the first dispersion generator for ~~outputting a second optical signal added~~ adding a dispersion to the first optical signal output from the ~~light-emitting device~~ laser diode, the first dispersion generator adding the dispersion of the other of the optical paths to a portion of the optical signal output from the second dispersion generator;

~~a first dispersion generator for adding the dispersion send from the central station to a portion of the second optical signal output from the second dispersion generator and for outputting a dispersed optical signal; and~~

[[a]] the processing unit ~~for~~ controlling the second dispersion generator so as to ~~compensate~~ maintain the dispersed optical signal output from the first dispersion generator to have a predetermined quality.

8. (Cancelled)